



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,423	03/30/2001	Michael A. Popp	SSM488US	1226

7590 04/27/2004

James C Simmons
Ratner & Prestia
One Westlakes Berwyn Suite 301
PO Box 980
Valley Forge, PA 19482-0980

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/806,423	Applicant(s) POPP ET AL.	
	Examiner Virginia Manoharan	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 22-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 22-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The drawings are objected to because of the used of foreign terms in identifying the elements in the drawing, e.g. "Fraktion". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The specification had not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicants cooperations are requested in correcting any errors of which applicants may become aware in the specification.

The disclosure is objected to because of the following informalities: a reference to and brief description of the drawing(s) is missing from the specification.

Claims 1-19 and 22-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1 is incomplete for failing to recite the structural relationship between the flash evaporator and the vapour concentration. Also, the term "vapour" should be – vapor- as the latter is the one normally used in the U.S.

b) There are no proper antecedent basis for supports in the claims for the following recitations:

Art Unit: 1764

- 1) "The bottoms product" recited in claim 1, last line. See also claim 14, d).
- 2) The limitation "before said bottoms product is reused in step a)". [The "reused" is not initially recited in the base claim].
- 3) "The heat carrier liquid" in claim 15.
- 4) "The distillate side" in claim 13.
- 5) "The overhead product" in claim 13.
- 6) "... the water and alcohol ratio" in claims 17 & 40-41.
- c) It is unclear what is meant by "inoffensive concentration" recited in the preamble of claim 14 especially since it is not described in the specification.
- d) The inconsistent use of terminology in the claims is improper. For example:
"solutions" (plural) in claim 1, line 1 as opposed to "solution" (singular) in line 3.
- e). It is unclear from claim 14, whether the overhead product is concentrated as recited in step b), or condensed as recited in step c) ?
- e) It is not clear as to the function(s) of the rectifier(s) between the condensation stages and as to what constitute the products of rectification(s). They are not specified in the claims nor defined in the specification. See e.g., claims 4, 23-24.
- f) What constitute the amount and water/alcohol ratio within the context of the claimed invention? They are not also specified in the claims nor mentioned in the specification? See e.g., claim 17.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1764

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, & 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by WO '780 to Baumann.

Baumann anticipates the claimed apparatus as broadly claimed in claim 1. That is, Baumann discloses a vacuum distillation plant, comprising in combination of a flash evaporator (26); a vent condenser (63) [corresponding to the claimed vapor concentration means]; a multi-stage condenser (40,65, 42) positioned downstream of the vapour concentration means and means (19) for recycling part of the condensate into the bottoms product. Likewise, Baumann's condensation stages (40) and (42) and the mixing container (1) would read on claim 6 and claim 8 limitations respectively. See Fig.1 and the abstract.

Claims 1-19 and 22-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '780 to Baumann and Kramer Sr. (4,305,790).

Baumann is discussed supra.

It would have been obvious to one of ordinary skill in the art to provide rectification between the condensation stages in the apparatus and process of WO'780 as such is conventionally done in the art as taught by Kramer. That is, Kramer discloses or suggests that condensate from enricher (24) may be refluxed to the rectifying portion of evaporation (24), and further discloses or suggests that the alcoholic condensate is refluxed to enricher (24) for further rectification. See e.g. col.4 26-45. See further col.4, lines 8-11 wherein the condensed volatile product is contacted counter currently with the moving vapor thereby enriching (rectifying) the more volatile

Art Unit: 1764

alcohol component. Note the advantages derived in combining flash evaporation with rectification as suggested at col.1, lines 30-33 of the Kramer's reference.

Claims 42-44 are obvious in view of Kramer's showing in Fig. 2 of a bottoms product of column (47) passing to a flash box. See also col.5, lines 10-15 wherein it is suggested that the flash boxes are used to collect slops.

Claims 17, 19 recitation of the ethanol content in vol.% are deemed to be result-effective -variables which ordinarily are within the skilled of the art. See e.g., claims 17, 19, 40-41, 45-49.

It is requested that applicants provide more information or copies regarding German 198 49 010.0 indicated in the oath or declaration where priority is not being claimed , e.g., dates of publication, etc., so proper determination under 35 U.S.C. 102(d) can be made.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Robbins discloses a distillation system and process for removing vaporizable components from an aqueous medium.

B) Lionelle et al discloses a process wherein the condensate is further enriched in alcohol.

C) Nazzer discloses a process and apparatus wherein the recycle liquor and feed stream are mixed upon delivery to the separation vessel.

D) Fagerling et al discloses a process of flashing the bottom stream and condensate to concentrate the slops in each respective effect.

Art Unit: 1764

E) Worthen et al discloses a low-pressure flash evaporator.

F) Goodwin et al discloses an apparatus containing expansion means.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola, can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manoharan/tgd

April 22, 2004


VIRGINIA MANOHARAN
PRIMARY EXAMINER
ART UNIT 133
4/25/04